IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Before the Board of Patent Appeals and Interferences

In re the Application

Inventor	:	Johnson, M.T.
Application No.	:	**10/569,173**
Confirmation No.	:	**7872**
Filed	:	February 22, 2006
For	:	***Method for Controlling Pixel Brightness in a Display Device***

APPEAL BRIEF

On Appeal from Group Art Unit 2629

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Attn. Doc. No. 2003P00608WOUS

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I. REAL PARTY IN INTEREST

The real party in interest is the assignee of the present application, U.S. Philips Corporation, and not the party named in the above caption.

II. RELATED APPEALS AND INTERFERENCES

With regard to identifying by number and filing date all other appeals or interferences known to Appellant that will directly affect or be directly affected by or have a bearing on the Board's decision in this matter, Appellant is not aware of any such appeals or interferences.

III. STATUS OF CLAIMS

Claims 1-12 have been presented for examination. All of these claims are pending, stand finally rejected, and form the subject matter of the present appeal.

IV. STATUS OF AMENDMENTS

In response to the Final Office Action, having a mailing date of August 12, 2011, Appellant timely submitted, within two months, arguments to overcome the reasons for rejecting the claims. An amendment to claim 12 was made to correct a typographic error. In reply to the Appellant's Response to the Final Office Action, an Advisory Action, having a mailing date of November 9, 2011, was entered into the record. The Advisory Action provided further rationale for maintaining the rejection of the claims in reply to the Appellant's arguments. The Advisory Action further stated that for purposes of Appeal the amendments to the claims would be entered. A copy of the claims, as currently of record, is presented herein.

A Notice of Appeal was timely filed in response to the Advisory Action and this Appeal Brief is being timely filed, with appropriate fee, within the period of response from the date of the Notice of Appeal.

V. SUMMARY OF CLAIMED SUBJECT MATTER

The present invention is expressed primarily in independent claims 1 and 12. Claim 1 represents an active matrix device. Claim 12 represents an electronic device incorporating the active matrix device recited in claim 1.

Independent claim 1 recites a matrix display device (6, Figure 4, page 8, lines 4-5) comprising: a display (2, figure 4, page 8, lines 5-6) with a plurality of display pixels (3, figure 4, page 8, lines 10-11); a data input (10, figure 4) for receiving a data signal; a controller (7, figure 4, page 8, lines 10-16) for distributing said data signal over said display pixels (3) to generate an image on said display (2) with an overall brightness level, during at least one frame period (F, figure 2), wherein said device (6) is adapted to: divide said frame period (F) into a first subperiod and an adjacent second subperiod for at least one subset (S) of said display pixels (3) such that said display pixels (3) of said at least one subset (S) have at least a light output (L) at a first non-zero brightness level (L1) for a duration of the first sub-period (F1, figure 2, page 6, lines 1-2) of said frame period (F) and at a second non-zero brightness level (L2) for a duration of the second sub-period (F2, Figure 2, page 6, lines 2-3) of said frame period (F), wherein the first and second levels of brightness are selected so that the time averaged sum of said brightness levels (L1,L2) of said pixels within said at least one subset (S) is substantially equal to said overall brightness level of said image (page 6, lines 3-5) in said at least one subset (S), said second level being maintained a stable level during the second sub period and the first and second levels being in a known ratio (page 6, lines 15-18).

Independent claim 12 recites an electronic device (1, Figure 1, page 5, line 18)) comprising an active matrix display device (6, Figure 4, page 8, lines 4-5) comprising: a display (2, Figure 4, page 8, lines 5-6) with a plurality of display pixels (3, Figure 4, lines 10-11); a data input (10, Figure 4, line 10) for receiving a data signal; a controller (7, Figure 4, lines 10-16) for distributing said data signal over said display pixels (3) to generate an image on said display (2) with an overall brightness level during at least one frame period (F, Figure 2), wherein said device (6) is adapted to divide said frame period (F) into a first subperiod and an adjacent second subperiod for at least one subset (S) of said display pixels (3) such that said display pixels (3) of said at least one subset (S) have at least a light output (L) at a first non-zero brightness level (L1) for a duration of the first sub-period (F1, Figure 2, page 6, lines 1-2) of said frame period (F) and at a second non-zero brightness level (L2) for a duration of the second sub-period (F2, Figure 2, page 6, lines 2-3) of said frame period (F), wherein the first and second levels of brightness are selected so that the time averaged sum of said brightness levels (L1,L2) of said pixels within said at least one subset (S) is substantially equal to said overall brightness level of said image (page 6, lines 3-5) within said at least one subset (S) wherein said second level being maintained a stable level during the second sub period and the first and second brightness levels being in a known ratio (page 6, lines 15-18).

The remaining claims, which depend from the independent claims, provide further aspects of the invention claimed.

VI. GROUNDS FOR REJECTION TO BE REVIEWED ON APPEAL

The issue in the present matter is whether:

1. Claims 1- 12 are unpatentable over Friend (US 6,429, 601) in view of Yamazaki (US 6,326,941) under 35 USC §103(a).

VII. ARGUMENT

I. Rejection of Claims 1-12 under 35 USC §103

The rejection of claims 1- 12 as being unpatentable over Friend (US 6,429, 601) in view of Yamazaki (US 6,326,941) under 35 USC §103(a) is in error as the combination of Friend and Yamazaki fails to disclose a material element recited in independent claims 1 and 12 and the claims dependent therefrom.

Summary of the Rejection of the Claims

In supporting the rejection of claim 1, for example, which is typical of the remaining independent claims, the Final Office Action refers to Friend for disclosing an active matrix display device comprising a display with a plurality of display pixels, a data input, a controller for distributing said data signal over said display pixels to generate an image on said display with an overall brightness level during at least one frame period, wherein said device is adapted to divide said frame period for at least one subset of said display pixels such that said display pixels of said at least one subset have at least a light output at a first non-zero brightness level for a duration of the first sub-period of said frame period and at a second non-zero brightness level for a duration of the second sub-period of said frame period, wherein the first and second levels of brightness are selected so that the time averaged sum of said brightness levels of said pixels within said at least one subset is substantially equal to said overall brightness level of said image in said at least one subset, said second level being

maintained a stable level during the second sub-period and the first and second levels being in a known ratio.

The Office acknowledges that Friend fails to disclose dividing said frame period into a first sub-period and an adjacent second sub-period.

The Office refers to Yamazaki for teaching the element of dividing said frame period into a first sub-period and an adjacent second sub-period.

The Office then concludes that it would have been obvious to combine the display of Friend with the display of Yamazaki since such modification provides plural pulses to each picture element so that an average voltage of one frame of an image can be made an arbitrary value to improve display quality.

In response to the rejection of the claims, the Appellant argued that "Friend discloses that the overall brightness level (e.g., 20 percent) is achieved with a first non-zero voltage period and a second non-zero voltage period and a zero voltage period in-between. There is also a zero voltage period after the second non-zero voltage pulse.

Thus, Friend fails to disclose at least one element recited in the claims (i.e., first and second periods of non-zero voltage). Figure 7 [of Friend] illustrates single period of voltage and non-voltage and Figure 8 [of Friend] illustrates a plurality of periods of voltage and non-voltage. However, neither Figure 7 nor Figure 8 teaches a first subperiod and an adjacent second subperiod, each having a non-zero voltage level for the duration of the subperiod.

Referring to Figure 7 of Friend, Figure 7 illustrates three examples of [a frame being divided into] two subframes [or subperiods]. In the first example,

one subframe includes a non-zero voltage and the second subframe includes a zero voltage (i.e., 10 percent brightness). The second and third examples also illustrate a non-zero voltage subframe and a zero-voltage subframe for 20 percent and 40 percent brightness levels, respectively.

Thus, Figure 7 fails to illustrate a system with two adjacent subframes of non-zero voltages.

With reference to line '7' of Figure 3A of Yamazaki, Yamazaki teaches a system wherein a frame is divided into at least three subframes, labeled as "1," "16" and "4." Line "7" of Figure 3A illustrates that two of the subframes include non-zero voltages and the third subframe includes a non-zero voltage. See, for example, line "37" which illustrates a first subframe of non-zero voltage, a second subframe of zero voltage and a third subframe of non-zero voltage. Figure 4A illustrates a similar configuration wherein the frame is divided into four subframes (line "37; a first subframe of non-zero voltage, a second subframe of zero voltage and a three and fourth subframe of non-zero voltage.).

Hence, Yamazaki fails to disclose a system where ***the frame is divided into a first and second, adjacent, subframes.*** Rather Yamazaki, discloses that the frame in divided into three and four subframes

In reply to Appellant's arguments presented in response to the rejection of the claims in the Final Office Action, the Office states "[a]pplicant further argues that Yamazaki fails to disclose a system where the frame is divided into a first and second, adjacent , subframes and further that Yamazaki discloses that the frame is divided into three and four subframes. Examiner disagrees, and

Applicant's attention is drawn to figs. 3-5 and col. 5, lines 6-45 of Yamazaki. For example, line '7' of fig. 3A discloses two sub-periods, one with a width of 1, the other with a width of 4. Furthermore, lines '26' and '37' of fig. 3A clearly discloses two subperiods, one with a width of 5, the other with a width of 16. Thus, Yamazaki does disclose a frame period divided into a first sub-period and an adjacent second sub-period, as recited in claims 1 and 12. Furthermore, in response to applicant's argument regarding the incorporation of elements of Yamazaki into elements of Friend, the test of obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art..."

Difference between the Claimed Invention Recited in the Independent Claims and the Cited Reference

The instant invention, as recited in claim 1, for example, recites

1. (Previously presented) Active matrix display device (6) comprising:

a display (2) with a plurality of display pixels (3);

a data input (10) for receiving a data signal;

a controller (7) for distributing said data signal over said display pixels (3) to generate an image on said display (2) with an overall brightness level, during at least one frame period (F),

wherein said device (6) is adapted to:

divide said frame period (F) into a first subperiod and an adjacent second subperiod for at least one subset (S) of said display pixels (3) such that said display pixels (3) of said at least one subset (S) have at least a light output (L) at a first non-zero brightness level (L1) for a duration of the first sub-period (F1) of said frame period (F) and at a second non-zero

brightness level (L2) for a duration of the second sub-period (F2) of said frame period (F), wherein the first and second levels of brightness are selected so that the time averaged sum of said brightness levels (L1,L2) of said pixels within said at least one subset (S) is substantially equal to said overall brightness level of said image in said at least one subset (S), said second level being maintained a stable level during the second sub period and the first and second levels being in a known ratio.

In response to the Office's rejection of the claims presented in the Final Office Action and Reply presented in the Advisory Action, Appellant respectfully submits that Friend teaches a system wherein a plurality of pulses within a frame are used to determine a brightness level associated with pixel element. Specifically, Figure 7 illustrates a condition wherein a single non-zero pulse (i.e., a first sub-period) and single zero pulse (second sub-period) determine an image brightness. In addition, Figure 8 illustrates an embodiment of the system of Friend, wherein a number of pulses of fixed duration are used to represent an image brightness level. In Figure 8, a brightness level of 10 percent is achieved by a single pulse of a fixed duration and height with a frame (designated between elements 36, which represent a cycle and correspond to a frame in the instant application). A brightness level of 20 percent is achieved by two pulses, each of the fixed (and same) duration and height, which are separated by a period of zero voltage, and a brightness level of 40 percent is achieved by four pulses, each of the same fixed duration and height and separated by a period of zero voltage. Friend describes the process shown in Figure 8, as "FIG. 8 shows a plot of applied current against time for a single pixel. The lines 36 separate cycles of the drive scheme. During the three cycles shown in FIG. 8 the brightness of the pixel is increased from around 10% to around 40%. The on-time of the pixel is

applied as a series of pulses of equal length… which, when added together, give the total on-time per cycle needed to achieve the required duty cycle. With the total on-time per cycle kept the same the pattern of current between the on time and the off time can be varied to suit other requirements ---e.g. to reduce flicker or cross-talk." (see col. 7, lines 25-35).

Figure 8, accordingly, explicitly illustrates that the pulses, when more than one pulse is used to determine a brightness level, are separated by a non-zero value.

Thus, in the case of a single pulse (Figure 7 or the first cycle of Figure 8), Friend fails to teach the claim element of "said display pixels (3) of said at least one subset (S) have at least a light output (L) ***at a first non-zero brightness level (L1) for a duration of the first sub-period (F1) of said frame period (F) and at a second non-zero brightness level (L2) for a duration of the second sub-period*** (F2) of said frame period (F)."

In addition, when a plurality of pulses are used to determine a brightness level (i.e., Figure 8, second and third cycles), Friend fails to disclose the element of "***divide said frame period (F) into a first subperiod and an adjacent second subperiod for at least one subset (S) of said display pixels (3) such that said display pixels (3) of said at least one subset (S) have at least a light output (L) at a first non-zero brightness level (L1) for a duration of the first sub-period (F1) of said frame period (F) and at a second non-zero brightness level (L2) for a duration of the second sub-period*** (F2) of said frame period (F)."

Yamazaki discloses a system in which a frame is divided into a plurality of subframes and voltages applied to the respective subframes generates a corresponding numerical value. For example, with respect to Figures 3A and 4A, which are referred-to in the Final Office Action and the Advisory Action, Yamazaki discloses a frame being divided into a plurality of subframes, wherein each subframe is composed of at least one sub-unit. The application of a voltage to a corresponding subframe (i.e., plurality of sub-units) determines a particular value. For example, with reference to Figure 3A, Yamazaki discloses three subframes of duration 1, 4 and 16 sub-units, respectively. The number 1 may be expressed as a single pulse of a fixed height and duration of one sub-unit. A number 7 may be expressed as a first pulse of a height of 3 and a duration of one sub-unit and a second pulse of height 1 and duration of four subunits. Similarly, the number 26 may be determined as a first pulse of height 2 and duration of one sub-unit, a second pulse of height 2 and duration of four sub-units and a third pulse of height 1 and duration of 16 sub-units. Figure 4A illustrates a similar organization for expressing values using four subframes per frame, wherein the subframes are composed of 1, 3, 9 and 27 sub-units, respectively.

Yamazaki teaches the organization of Fig. 3, for example, in col. 7, lines 6-27; "Fig. 3 shows an example. Figs. 3(A) and (B) are essentially identical to each other except that the pulse order is altered. In the example, of Fig. 3, '1' can be represented by a pulse whose height is 1 and whose width is 1 (minimum pulse). '4' can be represented by a pulse whose height is 1 and whose width is 4. '16'

can be represented by a pulse whose height is 1 and whose width is 16. '32' can be represented by a pulse whose height is 2 and whose width is 16. As shown in the Fig. 3, all numbers for '0', '1' to '60' can be represented by a combination of these pulses." Yamazaki teaches similar organization of the frame shown in Figure 4. See col. 5, lines 29-45.

Hence, while Yamazaki discloses three and four subframes, Yamazaki, in fact discloses a plurality of sub-units, which may be combined to represent three, four, five, etc. subframes into which a frame may be divided. Thus, Yamazaki fails to disclose the element of dividing the frame into two non-zero adjacent subframes (sub-periods), as is recited in the claims.

Thus, even assuming that the line "7" of Fig. 3A, which is referred to in the Office Action and the Advisory Action, illustrates a first and, an adjacent, second subperiod, the frame of Fig 3A is divided into 21 individual sub-units that are formed into three subframes of which two are adjacent and have non-zero values.

Thus, even if the teachings of Yamazaki of dividing the frame into a plurality of units and then forming subframes from at least one of the units were introduced into the teachings of Friend, the combination fails to provide any teaching regarding dividing the frame into a first subframe and an adjacent second subframe.

Furthermore, as Yamazaki teaches dividing the frame into individual units that may be combined in a desired manner, Yamazaki fails to provide any

motivation to alter the teaching of Friend to divide a frame into a first, and an adjacent, second subframe, as is recited in the claims.

Rather, Yamazaki explicitly teaches dividing the frame into a significant number of units which are then formed into a desired number of sub-frames.

Nowhere does Yamazaki provide a motivation to alter the teachings of Friend to represent each of the pulses shown in Figure 8 to be adjacent, as is recited in the claims.

In addition, assuming, arguendo that the representation of the number 7, (Fig. 3A of Yamazaki) may be incorporated into the teachings of Friend, then the combined device would cause each pulse illustrated by Friend, in Figure 8, for example, to be represented by three subframes (as shown in Figure 3A of Yamazaki).

For example, Figure 8 of Friend illustrates a plurality of pulses to generate 10, 20 and 40 percent brightness levels, respectively.

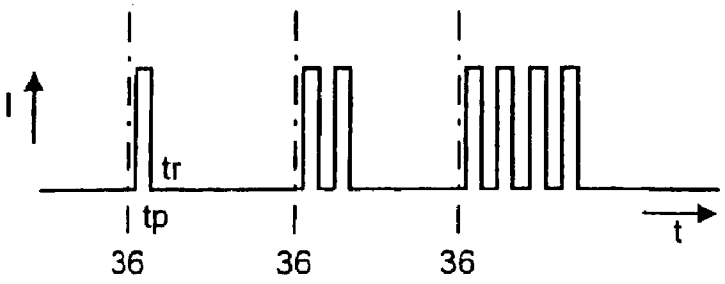
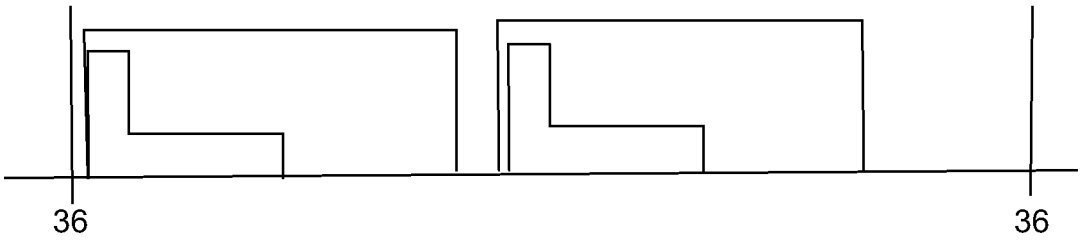


FIG. 8

Incorporating the teaching of Yamazaki (in particular line "7" of Fig. 3A) causes each pulse of Friend to be represented as three subframes. Thus, the

two pulses of equal height that creates a 20 percent brightness level may be represented as:



Expanded Second Cycle of FIG. 8 of Friend

In this case, the line 7 of Figure 3A of Yamazaki is incorporated into each pulse shown in the second cycle of Figure 8 of Friend. However, the two pulses disclosed by Friend are not adjacent, as is recited in the claims.

Hence, the combination of Friend and Yamazaki fails to teach the element of "***divide said frame period (F) into a first subperiod and an adjacent second subperiod for at least one subset (S)*** of said display pixels (3) such that said display pixels (3) of said at least one subset (S) have at least a light output (L) at a first non-zero brightness level (L1) for a duration of the first sub-period (F1) of said frame period (F) and at a second non-zero brightness level (L2) for a duration of the second sub-period (F2) of said frame period (F)."

Alternatively, assuming arguendo that line 7 of Figure 3A of Yamazaki is incorporated into the teachings of Friend, then the result of introducing line 7 of Figure 3A of Yamazaki into Friend would be two adjacent pulses of non-zero value and a single pulse of a zero value. Such a configuration is comparable to the pulse scheme illustrated in Figure 7 of Friend, which has been shown to

represent a first subperiod of non-zero value and a second subperiod of zero value.

Hence, this alternative representation of the combination Friend and Yamazaki results in a system that is comparable to that shown in Figure 7 of Friend, which has been shown to not disclose a material element recited in the claims.

In order to establish a *prima facie* case of obviousness, three basic criteria must be met;

> 1. there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or combine the reference teachings;
>
> 2. there must be a reasonable expectation of success; and
>
> 3. the prior art reference must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must be found in the prior art, and not based on Appellant's disclosure. In re Vaeck, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

However, in addressing an obviousness determination under 35 USC §103, the Supreme Court in *KSR International v. Teleflex Inc.* (citation omitted) addressed the teaching, suggestion or motivation (TSM) standard for obviousness that had been imposed in decisions rendered by the Court of Appeals for the Federal Circuit (CAFC) and found that the TSM standard to combine the teachings of the references provides a "helpful hint" in determining

whether claimed subject matter is obvious. The Court however stated that the application of the TSM (teaching, suggestion, motivation) test is not to be applied in a rigid manner and a bright light application of such a test is adverse to those factors for determining obviousness enumerated in the *Graham v. John Deere* (i.e., the scope and content of the prior art, the level of ordinary skill in the art, the differences between the claimed invention and the prior art and objective indicia of non-obviousness) (citation omitted).

In this case, contrary to the assertions made in maintaining the rejection of the claims, Appellant submits that the combination of the cited references fails to disclose a material element (i.e. ***divide said frame period (F) into a first subperiod and an adjacent second subperiod for at least one subset (S) of said*** display pixels (3) such that said display pixels (3) of said at least one subset (S) have at least a light output (L) at a first non-zero brightness level (L1) for a duration of the first sub-period (F1) of said frame period (F) and at a second non-zero brightness level (L2) for a duration of the second sub-period (F2) of said frame period (F)***"***) recited in independent claim 1 and, hence, there is significant difference between the device resulting from the combination of Friend and Yamazaki.

Accordingly, the combination of Friend and Yamazaki fails to render obvious the subject matter recited in the independent claims as the combination fails to disclose a material element recited in the claims.

In addition, Yamazaki fails to provide any motivation to "divide said frame period (F) into a first subperiod and an adjacent second subperiod ...,' as is recited in the claims.

Rather, Yamazaki teaches dividing the frame into a plurality of sub-units, which are then combined to form subframes (sub-periods) of desired lengths. The values in each of the subframes may be used to represent a specific value.

Thus, while in cases, the values in two of the three or four subframes illustrated may be non-zero values, Yamazaki fails to provide motivation to develop a system of first and second subframes with non-zero values. Rather, the line 7 of Fig. 3A of Yamazaki is merely a result of selecting a particular value to be represented by the combination of the illustrated subframes.

Yamazaki discloses other combinations of values in respectively subframes in which two adjacent non-zero subframes do not exist.

In this case, the Office has merely referred to a reference (Yamazaki) to show that two non-zero adjacent subframes may exist.

However, Yamazaki does not provide the motivation to have all combination of numbers to be represented to contain two non-zero adjacent subframes. For example, Yamazaki specifically teaches that the number 7 in Fig. 3B may be represented by two non-adjacent, non-zero subframes.

Hence, in the case of Fig. 3B, Yamazaki teaches away from having adjacent non-zero subframes.

For at least the above reasons, Appellant respectfully submits that a case of obviousness of the independent claims has not been set forth as the combination of the references fails to disclose all the elements recited in the independent claims.

In addition, The Manual of Patent Examining Procedure (MPEP) provides further appropriate instruction by which the instant Appeal should be judged. MPEP, Eight Edition, Rev. 2, May 2004, provides in section 2143 entitled: "Fact That The Claimed Invention Is Within The Capabilities Of One Of Ordinary Skill In The Art Is Not Sufficient By Itself To Establish *PRIMA FACIE* Obviousness:"

> "A statement that modification of the prior art to meet the claimed invention would have been "'well within the ordinary skill of the art at the time the claimed invention was made'" because the references relied upon teach that all aspects of the claimed invention were individually known in the art is not sufficient to establish a prima facie case of obviousness without some objective reason to combine the teachings of the references." *Ex parte Levengood* 28 USPQ2d 1300 (Bd. Pat. App. & Inter. 1993). MPEP §2143.01, p. 2100-131.

In this case, the Office refers to one or two specific examples of adjacent non-zero subframes that may be achieved by the system of Yamazaki. However, these adjacent non-zero subframes are only achieved by a particular value being represented by the system of Yamazaki. Yamazaki fails to provide any motivation to develop a system with non-zero adjacent sub-frames.

Hence, as the references fail to teach all the elements recited in the claims, and significant modification of the teachings of the references are necessary to satisfy the subject matter claimed, Appellant respectfully submits that a *prima*

facie case of obviousness has not been made as the Office has failed to show the combination of the cited references discloses, teaches or suggests, even after substantial modification, all the elements recited in the claims.

For at least the above reasons, Appellant respectfully submits that a case of obviousness with regard to independent claims 1 and 12 has not been set forth.

With regard to the remaining claims 2-11, these claims depend from the independent claims and Appellant respectfully submits that these claims are also not rendered unpatentable over the combination of Friend and Yamazaki at least for their dependence upon an allowable base claim, without contemplating the merits of the rejection of the dependent claims for reasons held in *In re Fine,* 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) (if an independent claim is non-obvious under 35 U.S.C. §103(a), then any claim depending therefrom is non-obvious).

In view of the above, Appellant submits that the independent claims, and the claims dependent therefrom, are patently distinguishable and not rendered obvious over the teaching of the cited references.

Appellant respectfully requests that this Honorable Board reverse the rejection of the claims and issue a Notice of Allowance.

VIII. CONCLUSION

In view of the above analysis, it is respectfully submitted that the referenced teachings, whether taken individually or in combination, fail to render obvious the subject matter of any of the present claims. Therefore, reversal of all outstanding grounds of rejection is respectfully solicited.

Respectfully submitted,

/Carl A. Giordano/

Date: January 3, 2012

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IX. CLAIMS APPENDIX

1. (Previously presented) Active matrix display device (6) comprising:

a display (2) with a plurality of display pixels (3);

a data input (10) for receiving a data signal;

a controller (7) for distributing said data signal over said display pixels (3) to generate an image on said display (2) with an overall brightness level, during at least one frame period (F),

wherein said device (6) is adapted to:

divide said frame period (F) into a first subperiod and an adjacent second subperiod for at least one subset (S) of said display pixels (3) such that said display pixels (3) of said at least one subset (S) have at least a light output (L) at a first non-zero brightness level (L1) for a duration of the first sub-period (F1) of said frame period (F) and at a second non-zero brightness level (L2) for a duration of the second sub-period (F2) of said frame period (F), wherein the first and second levels of brightness are selected so that the time averaged sum of said brightness levels (L1,L2) of said pixels within said at least one subset (S) is substantially equal to said overall brightness level of said image in said at least one subset (S), said second level being maintained a stable level during the second sub period and the first and second levels being in a known ratio.

2. (original) Active matrix display device (6) according to claim 1, wherein said display (2) is a colour display and said subset (S) is defined by colour (R,G,B).

3. (original) Active matrix display device (6) according to claim 1, wherein said device (6) is adapted to determine one or more particular areas (A) of said display and said subset is defined by said areas.

4. (original) Active matrix display device (6) according to claim 1, wherein said device (6) is adapted to determine the total time during which said display pixels (3) have had a light output and said subset (S) is defined by said total time.

5. (original) Active matrix display device (6) according to claim 1, wherein said first brightness level (L1) exceeds said second brightness level (L2).

6. (original) Active matrix display device (6) according to claim 1, wherein said first sub-period (F1) has a shorter duration than said second sub-period (F2).

7. (original) Active matrix display device (6) according to claim 1, wherein said device (6) is adapted to supply a select signal (18) for selecting said display pixels (3) of said subset (S), said select signal (18) comprising at least a first select signal (18') triggering said first sub-period (F1) and a second select signal (18") triggering said second sub-period (F2).

8. (original) Active matrix display device (6) according to claim 1, wherein said display pixels (3) comprise current emissive elements (14) driven by drive elements (T2) and said device (6) is adapted to vary a voltage (13;15) for said drive elements (T2) such that said at least one subset (S) of current emissive elements (14) is driven to at least said first brightness level (L1) during said first sub-period (F1) and said second brightness level (L2) during said second sub-period (F2).

9. (original) Active matrix display device (6) according to claim 1, wherein said display (2) is an active matrix liquid crystal display, said device (6) comprising a backlight (20) and being adapted to control said backlight (20) such that said light output (L) of said display pixels (3) of said at least one subset (S) yields said first brightness level (L1) during said first sub-period (F1) and said second brightness level (L2) during said second sub-period (F2).

10. (original) Active matrix display device (6) according to claim 9, wherein said display (2) is a colour display and said backlight (20) is a LED-backlight or a colour sequential backlight.

11. (original) Active matrix display device (6) according to claim 1, wherein said device (6) is adapted to generate said light output (L) such that said second brightness level (L2) has a brightness that is 30% or less than said first brightness level (L1).

12. (Previously presented) Electronic device (1) comprising an active matrix display device (6) comprising:

a display (2) with a plurality of display pixels (3);

a data input (10) for receiving a data signal;

a controller (7) for distributing said data signal over said display pixels (3) to generate an image on said display (2) with an overall brightness level during at least one frame period (F),

wherein said device (6) is adapted to divide said frame period (F) into a first subperiod and an adjacent second subperiod for at least one subset (S) of said display pixels (3) such that said display pixels (3) of said at least one subset (S) have at least a light output (L) at a first non-zero brightness level (L1) for a duration of the first sub-period (F1) of said frame period (F) and at a second non-zero brightness level (L2) for a duration of the second sub-period (F2) of said frame period (F), wherein the first and second levels of brightness are selected so that the time averaged sum of said brightness levels (L1,L2) of said pixels within said at least one subset (S) is substantially equal to said overall brightness level of said image within said at least one subset (S) wherein said second level being maintained a stable level during the second sub period and the first and second brightness levels being in a known ratio.

13. (Cancelled).

X. EVIDENCE APPENDIX

Other than those documents submitted in an Information Disclosure Statement provided by the Appellant and the prior art references cited by the Examiner, no further evidence is submitted herein.

XI. RELATED PROCEEDING APPENDIX

No related proceedings are pending and, hence, no information regarding same is available.